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ABSTRACT

This study investigated the employment status and earnings of students in the 58 institutions in the North Carolina Community College System (NCCCS) during the years 1993-94, 1994-95, and 1995-96. Data were derived from a state system that uses unemployment insurance files to track employment of students, the NCCCS registration files, and a database submitted by the community colleges to the state which contains information on completion status and number of credit hours completed. After analysis by descriptive statistical research methods, it was found that: (1) exit noncompleters had the highest annual earnings, however, mean earnings of exit completers increased at the fastest rate; (2) older students had higher earnings than younger ones, but, exit completers under age 25 had the highest earnings in the four groups; (3) completers who earned AAS degrees had higher earnings than those with associate degrees; and (4) mean earnings for exit noncompleters were not necessarily increased by the completion of more credit hours. The paper includes sections on the purpose and the research questions, a literature review, data sources, methodology, findings, and implications. Six data tables are provided. (Contains 6 references.) (CH)

Using Unemployment Insurance Data and Job Record Data to Track the Employment and Earnings of Community College Students

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Dolores Vura
Editor
AIR Forum Publications

Using Unemployment Insurance Data and Job Record Data to Track the Employment and Earnings of Community College Students

Abstract

The purpose of this study is to investigate the employment status and earnings of the North Carolina Community College System (NCCCS) curriculum students for the last 3 years by their completion status, degree and age. The primary data sources for this study are the CFS, the NCCCS curriculum student registration record, and the Curriculum Student Progress Information System (CSPIS). The descriptive statistical research methods are applied for this study. The findings of this study are: 1) Exit noncompleters had the highest annual earnings. However, the mean quarterly earnings of exit completers increased at a faster rate from quarter one to quarter four than the other groups; 2)The older students had higher annual earnings than younger ones in each group. However, for students who were under 25, the exit completers had the highest earnings among the four groups; 3) Completers who earned AAS degree, Certificate, and Diploma had higher annual earnings than those who had Associate degree. The mean quarterly earnings of AAS degree holders increased at a faster rate than the other degree holders; and 4) The mean annual and quarterly earnings for exit noncompleters were not necessarily increased by simply completing more credit hours.

Using Unemployment Insurance Data and Job Record Data to Track the Employment and Earnings of Community College Students

Introduction

Increased demands for accountability data have resulted in the need to have access to objective data that are reliable, valid and cost-effective. Whereas some data, such as graduation rates, can be calculated from a college's database, other data, such as employment and earnings, must be gathered from external sources. Typically, colleges have relied on surveys of alumni to determine employment status and earnings. The usefulness of these data, quite naturally, depends on the response rate of the alumni and the accuracy of the responses. Further, this type of data collection is often expensive, particularly if follow-up surveys are included to increase response rates.

A number of agencies in North Carolina have been experimenting with a system of matching student data files with the Unemployment Insurance files maintained by the Employment Security Commission. Based on a Florida model, this method of data collection is objective and not dependent on response rates to surveys. The question that needs to be answered, however, is the usefulness of these data in assessing the effectiveness of educational and training programs in preparing individuals for the workforce.

Purpose and Research Questions

The purpose of this study is to investigate the employment status and earnings of North Carolina Community College System curriculum students for the last three years. Curriculum programs, also known as credit programs, include College Transfer, General Education,

Technical, and Vocational programs and grant Associate degrees, AAS degrees, Certificates, and Diplomas. This study compares students' employment status and mean quarterly and annual earnings among the following groups: completers who did not re-enroll in any of the colleges in the following year (exit completers), completers who did re-enroll in the following year (comeback completers), noncompleters who did not re-enroll in the following year (exit noncompleters), and noncompleters who did re-enroll in the following year (comeback noncompleters). For exit completers, their employment status and mean quarterly and annual earnings were examined based on degrees earned, which include the Associate degree, AAS degree, Certificate, and Diploma. In addition, the exit noncompleters employment status and mean annual earnings were examined based on credit hours they completed when they were in the colleges.

More specifically, the objectives of this study are to address the following questions:

1. Do North Carolina community college completers have higher earnings than the noncompleters?
2. Do completers' earnings increase over time at a faster rate than the noncompleters?
3. Do older students have higher earnings than younger ones? Within a given age group, do completers have higher earnings than noncompleters?
4. For completers, does type of degree affect earnings?
5. For the noncompleters, do students who earned more credit hours have higher earnings than students who earned less credit hours?

Literature Review

Numerous follow-up and longitudinal studies on student outcomes such as job placement have been conducted in recent years. Typically those studies were conducted by mail or

telephone survey, and response rates varied. Palmer (1986) reviewed 48 such studies and found that most survey respondents (70 percent to 80 percent) reported they were employed full-time. Most of them indicated satisfaction with the technical knowledge or job skills they gained at college, but less satisfaction with the colleges' helpfulness in providing knowledge about career opportunities or in preparing them for career advances. He pointed out that survey limitations and methodological weaknesses made it difficult to assess the extent to which graduates' career outcomes could be attributed to their vocational studies.

The weaknesses Palmer noted in the follow-up studies included that most studies were conducted on a "one-shot" basis, were conducted too soon after graduation, had low response rates, and suffered from a lack of control groups against which to assess graduates' employment experiences. Palmer (1986) suggested using smaller selected samples, focusing on students who had completed at least 24 credits, and collecting longitudinal data to track career development.

A study of 1984 vocational associate degree completers in Ohio conducted by Ghazalah (1993) used federal income tax records in an effort to eliminate bias from self-reported surveys and to increase response rates. This study found that vocational graduates had higher earnings than the general population. Specifically, the earnings ranged from 12 percent to 68 percent higher for vocational graduates than the general adult population.

Friedlander (1993) conducted a study comparing earnings of associate degree holders with those of course completers based on wage record data in California. He concluded that students, 18 to 24 years of age, who received associate degrees from Santa Barbara City College from 1986 to 1990 earned an average of 27 percent more than students who completed 12 or more community college credits during the same period of time but did not complete degree requirements.

In a follow-up study conducted by Friedlander (1996), 4-year outcomes were investigated for 173,535 students at 18 California community colleges who either completed in 1992 or 1993 or stopped attending in 1991 or 1992. It was found that the earnings of students who received a certificate or degree from an occupational program were higher than both those who left occupational programs without a degree or certificate and those who completed non-occupational programs. It was also found that occupational students with a degree or certificate made a 47 percent gain in earnings between their last year of college and the third year after college.

Friedlander's (1996) follow-up study was consistent with an earlier study by W. Norton Grubb (1992). Grubb (1992) used the National Longitudinal Survey of the Class of 1972 (NLS72) and found that individuals who completed postsecondary credentials differed in many respects from those who had only a high school diploma. It was concluded that in the job market, completing programs was more important than completing individual courses. Grubb (1992) pointed out that:

> community college programs allow students entry into positions where they can accumulate more consistent work experience and more on-the-job training -- "careers" rather than "jobs" -- so that the advantages of two-year institutions develop over time rather than materializing immediately (p.11).

These and other studies on community college students demonstrate that research on employment and earnings should cover a period of time rather than a "snapshot." Further, more valid data collecting methods should be explored rather than solely relying on self-reporting surveys. The Unemployment Insurance wage record data provide an opportunity to conduct cost effective longitudinal studies without the problem of inaccurate surveys and non-responses (Brown and Choy, 1998).

Data Sources

This study involved the merging of three separate databases: the Common Follow-up System (CFS), the community college system curriculum registration file, and the community college system Curriculum Student Progress Information System (CSPIS). Each database will be briefly described.

The CFS was developed in 1992 by a state interagency committee known as the North Carolina State Occupational Information Coordinating Committee (NC SOICC). The committee identified the need for developing a systematic approach to gathering information on employment of former participants. Recognizing the success of Florida's efforts to track employment of students using the Unemployment Insurance (UI) files, the NC SOICC decided to develop a similar tracking system in North Carolina, which would be maintained by the Employment Security Commission (ESC).

Each year the agencies involved in the CFS submit unit record data on participants to the ESC. Among the agencies included in this process are the public high schools, community colleges, and the four year public universities. Each agency's data is matched against the Unemployment Insurance files and the other participating agencies' files. A database containing information on employment, employer, quarterly wages, receipt of unemployment benefits, and participation in other agencies' programs is returned to each submitting agency. The database each agency receives is limited to the participants that the agency submits for the data match. That is to say, the database received by community colleges has information on community college students whereas the database received by the four year public universities would contain only information on university students.

In designing the CFS, it was decided that the time frame for determining quarterly earnings would be the second, third, fourth and fifth quarters after a participant's completion of a program or, in the case of non-completers, after the end of the academic year. The rationale for this decision was that it allowed one quarter after completion for an individual to go through the job search process and would more accurately reflect the actual earnings of the individuals.

The CFS provides objective data on employment and earnings, however, there are a number of issues that must be recognized when using the database for evaluative purposes. First, only individuals employed in North Carolina and employed in jobs subject to the federal unemployment insurance guidelines will be found in the data match. If an individual is employed outside the state or is self-employed, no match will be found. This is not to say that such individuals are not employed, it simply means they are not found in the UI records. Second, quarterly wages are earnings during the 13 week quarter. There is no indication in the database as to how many weeks or hours during a quarter an individual worked. It is not possible, using the UI data, to separate part-time and full-time workers. Third, the data available on employment is limited to the name of the employer and the Standard Industrial Classification (SIC) code for the employer. It is not possible, from the UI data, to determine an individual's field of employment (*i.e.*, job title). As such, the question of whether or not a person is employed in a field related to their program of study cannot be answered from the UI data.

The community college database that results from the CFS contains information on employment and earnings of both curriculum (credit) program students and extension (noncredit) students. For this study, only information on curriculum students was examined. Later analyses are planned to look at noncredit, particularly basic skills (literacy), students.

Once received, the CFS database was matched against the curriculum student registration database and the CSPIS database. This matching was conducted to determine demographic characteristics of the participants, type of program (major) of the students, and completion status at the end of the academic year. The curriculum student registration database consists of quarterly registration files submitted by the 58 NC community colleges to the System Office. The CSPIS database is a file submitted by the community colleges to the System Office on an annual basis and contains, among other things, the completion status of students and the number of credit hours students have completed.

The total number of curriculum students involved in this study was 253,893 in 1993-94, 253,819 in 1994-95, and 255,880 in 1995-96. Of these individuals, approximately 84 percent were found to be in the UI database.

Methodology/Approach

This study mainly adopts descriptive statistical research methods. To analyze the CFS data in terms of students' employment status and quarterly earnings, several steps of data matching and merging were necessary. First, the CSPIS data for the year being examined and the following year's student registration record were merged to divide students into four groups with no duplication: exit completers, comeback completers, exit noncompleters, and comeback noncompleters. Next, the data set created in the first step was merged with the Agency record and the Job record from the UI files to determine employment status of the individuals in the study.

In the third step, the data set created in the first step was merged with the Job record to: 1) determine whether students were employed for four consecutive quarters or employed but not

for four consecutive quarters; and 2) examine and compare students' quarterly and annual earnings between the four groups and between different age groups. Finally, the quarterly and annual earnings were compared for exit completers between Associate degree, AAS degree, Certificate, and Diploma holders. For the exit noncompleters, their mean annual earnings were compared based on number of credit hours finished while they were in the colleges.

Findings

Mean annual and quarterly earnings were analyzed based on student completion status, which included exit completers, comeback completers, exit noncompleters and comeback noncompleters. The analyses also incorporated data on age, type of degree earned (completers only), and the number of credit hours completed (noncompleters only). The findings are presented as follows.

Finding 1: Exit noncompleters had the highest annual earnings. However, the mean quarterly earnings of exit completers increased at a faster rate from quarter one to quarter four than the other groups.

Based on the analysis, among North Carolina community college students who worked all four quarters in 1993-94 through 1995-96, the exit completers and exit noncompleters had higher annual earnings than the comeback completers and comeback noncompleters during the same time period. Among the four groups, exit noncompleters had the highest annual earnings, followed by exit completers, comeback noncompleters and comeback completers.

When the mean quarterly earnings were examined, it was found that the mean quarterly earnings of exit completers increased at a faster rate from quarter one to quarter four than the other groups. The increase from quarter one to quarter four was 24.98 percent, 23.02 percent and 25.89 percent in 1993-94, 1994-95 and 1995-96 respectively. The mean quarterly earnings of

comeback completers increased at a slower rate from quarter one to quarter four (12.43 percent, 15.78 percent and 12.79 percent in 1993-94, 1994-95 and 1995-96 respectively). The mean quarterly earnings of noncompleters increased at the lowest rate throughout the year in the three years studied. The increases for the exit noncompleters from quarter one to quarter four were 3.76 percent in 1993-94, 1.66 percent in 1994-95, and 3.62 percent in 1995-96. The comeback noncompleters' mean quarterly earnings increased by 4.07 percent in 1993-94, 1.68 percent in 1994-95 and 3.54 percent in 1995-96 from quarter one to quarter four (Table 1).

Table 1. Mean Annual Earnings and Increase Rate by Students' Status
(for those who worked four quarters)

Year	Students' Status	Annual Earnings	Percent Increase from 1st Qtr to 4th Qtr
1993-94	Exit Completers	$16,456.67	24.98%
	Comeback Completers	14,506.42	12.43%
	Exit Noncompleters	19,113.10	3.76%
	Comeback Noncompleters	15,913.05	4.07%
1994-95	Exit Completers	$17,198.11	23.02%
	Comeback Completers	14,255.41	15.78%
	Exit Noncompleters	19,224.05	1.66%
	Comeback Noncompleters	15,992.72	1.68%
1995-96	Exit Completers	$17,292.01	25.89%
	Comeback Completers	14,752.73	12.79%
	Exit Noncompleters	20,015.20	3.62%
	Comeback Noncompleters	16,321.01	3.54%

Among North Carolina community college students who worked less than 4 quarters, the findings were similar to those who worked all four quarters. For the three years studied, the annual earnings of exit completers and exit noncompleters were higher than those of

comeback completers and comeback noncompleters. In 1993-94, exit noncompleters had the highest annual earnings, followed by exit completers, comeback completers and comeback noncompleters. In 1994-95 and 1995-96, exit noncompleters had the highest annual earnings. However, the annual earnings of exit completers were close to those of the exit noncompleters. Comeback completers had the lowest annual earnings among the four groups. When the mean quarterly earnings were examined, it was found that at the beginning of the year (quarter one) exit noncompleters started with the highest mean quarterly earnings. By the 4th quarter, the mean quarterly earnings of exit completers exceeded those of exit noncompleters and comeback completers exceeded those of comeback noncompleters in 1993-94 through 1995-96 (Table 2).

Table 2. Mean Annual Earnings and Quarterly (1st Qtr and 4th Qtr) Earnings by Students' Status (for those who worked less than four quarters)

Year	Students' Status	Annual Earnings	Quarterly Earnings 1st Qtr	Quarterly Earnings 4th Qtr
1993-94	Exit Completers	$9,895.56	$2,245.67	$3,337.97
	Comeback Completers	8,460.90	1,877.94	2,226.81
	Exit Noncompleters	10,655.02	2,848.32	2,730.68
	Comeback Noncompleters	8,033.55	2,226.44	1,955.81
1994-95	Exit Completers	$10,125.81	$2,289.56	$3,335.50
	Comeback Completers	7,223.13	1,612.78	2,229.13
	Exit Noncompleters	10,196.38	2,775.16	2,503.02
	Comeback Noncompleters	7,885.66	2,192.30	1,887.15
1995-96	Exit Completers	$9,179.66	$1,953.24	$3,288.40
	Comeback Completers	6,374.47	1,345.19	2,136.32
	Exit Noncompleters	9,376.36	2,501.66	2,456.14
	Comeback Noncompleters	7,269.17	1,974.03	1,892.19

Finding 2: Older students had higher annual earnings than younger ones in each group. However, for students who were under 25, the exit completers had the highest earnings among the four groups.

When the earnings were analyzed based on students' age, it was found that the older students had higher annual earnings than younger ones in each group. For students who were under 25, the exit completers had the highest earnings among the four groups, followed by exit noncompleters, comeback completers and comeback noncompleters in the three years studied. For students who were older than 25, the results revealed that noncompleters had higher earnings than completers in those three years (Tables 3).

When age was examined for students who worked less than four quarters, it also revealed that among students who were under 25 years old, exit completers had the highest earnings followed by exit noncompleters, comeback completers and comeback noncompleters. Among students who were between 25 and 34, exit noncompleters had the highest earnings followed by exit completers, comeback noncompleters and comeback completers. Among students who were 35 and 44 years old, except in 1993-94, exit non-completers had the highest earnings, followed by exit completers, comeback noncompleters and comeback completers. For students who were over 45, the annual earnings of non-completers were higher than those of completers in the three years studied (Table 3).

Finding 3: Completers who earned an AAS degree, Certificate, or Diploma had higher annual earnings than those who had earned an Associate degree. The mean quarterly earnings of AAS degree holders increased at a faster rate than the other degree holders.

When the earnings of exit completers, who worked four quarters, were analyzed based on their obtained degrees, it was found that completers who earned an AAS degree,

Table 3. Mean Annual Earnings by Students' Status and Age, 1993-94 through 1995-96

Age	Students' Status	Year 1993-94	1994-95	1995-96
	Students worked 4 quarters:			
< 25	Exit Completers	$12,422.24	$13,698.26	$13,584.49
	Comeback Completers	10,239.85	10,482.04	10,287.80
	Exit Noncompleters	11,448.29	11,333.61	11,658.51
	Comeback Noncompleters	9,883.62	9,956.79	10,437.98
25 - 34	Exit Completers	$18,121.95	$18,634.10	$18,266.52
	Comeback Completers	16,351.79	16,205.74	16,595.05
	Exit Noncompleters	20,784.29	20,494.07	21,367.93
	Comeback Noncompleters	19,169.24	18,940.19	19,491.96
35 - 44	Exit Completers	$21,608.74	$21,319.77	$21,504.04
	Comeback Completers	20,205.88	19,945.00	20,535.23
	Exit Noncompleters	25,742.72	26,349.85	26,739.25
	Comeback Noncompleters	23,458.23	23,638.84	24,431.06
≥ 45	Exit Completers	$21,068.71	$21,863.57	$22,507.58
	Comeback Completers	20,635.13	19,337.86	20,905.40
	Exit Noncompleters	25,742.72	29,277.52	30,132.73
	Comeback Noncompleters	26,326.68	26,740.14	27,070.23
	Students worked < 4 quarters:			
< 25	Exit Completers	$8,535.23	$11,575.00	$7,919.15
	Comeback Completers	6,582.92	6,178.34	5,680.22
	Exit Noncompleters	6,659.35	6,384.51	6,050.81
	Comeback Noncompleters	5,727.34	5,570.96	5,325.00
25 - 34	Exit Completers	$10,718.99	$10,566.33	$9,429.02
	Comeback Completers	7,821.45	7,505.67	6,632.65
	Exit Noncompleters	13,118.87	11,829.88	11,118.83
	Comeback Noncompleters	9,896.16	9,487.63	8,666.47
35 - 44	Exit Completers	$11,081.18	$11,904.13	$10,597.60
	Comeback Completers	15,532.39	8,875.33	7,452.51
	Exit Noncompleters	15,181.21	15,301.76	13,654.91
	Comeback Noncompleters	12,124.70	11,451.75	10,308.54
≥ 45	Exit Completers	$11,897.07	$12,286.26	$11,240.08
	Comeback Completers	10,398.37	9,008.64	7,300.49
	Exit Noncompleters	18,431.41	18,412.81	17,012.35
	Comeback Noncompleters	14,304.64	15,412.71	14,109.45

Certificate, or Diploma had higher annual earnings than those who had earned an Associate degree. Further, the mean quarterly earnings of AAS degree holders increased at a faster rate than the other degree holders. From quarter one to quarter four, the mean quarterly earnings of AAS degree holders increased by 29.59 percent in 1993-94, 27.15 percent in 1994-95, and 32.64 percent in 1995-96. The mean quarterly earnings of Diploma holders increased by 23.06 percent, 15.36 percent, and 21.03 percent in 1993-94, 1994-95, and 1995-96 respectively. The mean quarterly earnings of Certificate holders increased by 21.56 percent in 1993-94, 23.35 percent in 1994-95, and 17.10 percent in 1995-96. The mean quarterly earnings of the Associate degree holder increased at the slowest rate (6.17 percent, 4.04 percent, and 9.98 percent in 1993-94, 1994-95, 1995-96 respectively). The above findings were also true for completers who worked less than four quarters in any given year (Table 4).

Table 4. Exit Completers' Mean Annual Earnings and Increase Rate by Degree (for those who worked four quarters)

Year	Degree Obtained	Annual Earnings	Percent Increase from 1st Qtr to 4th Qtr
1993-94	Associate Degree	$12,752.84	6.17%
	AAS Degree	17,067.86	29.59%
	Certificate	16,322.15	21.56%
	Diploma	17,197.25	23.06%
1994-95	Associate Degree	$12,216.64	4.04%
	AAS Degree	17,846.47	27.15%
	Certificate	17,323.58	23.35%
	Diploma	18,333.26	15.36%
1995-96	Associate Degree	$12,602.94	9.98%
	AAS Degree	17,856.87	32.64%
	Certificate	18,005.77	17.10%
	Diploma	17,852.02	21.03%

Finding 4: The mean annual and quarterly earnings for exit noncompleters were not necessarily increased by simply completing more credit hours.

For the exit noncompleters, earnings were examined based on the total number of credit hours completed before exiting. Two-year programs typically consist of 96 to 128 quarter credit hours. Students who finished less than or equal to 24 quarter hours of credits (one fourth of the requirement) and those who finished over 96 quarter hours of credits had higher annual earnings than the others in the three years. The results were true for both those who worked 4 quarters and those who worked less than 4 quarters in the three years (Table 5).

Table 5. Two-Year Program Exit Noncompleters' Mean Annual Earnings by Credit Hours Earned

Credit Hours Earned	Year 1993-94	1994-95	1995-96
Students worked 4 quarters:			
≤ 24 hours	$19,806.21	$19,688.96	$20,644.86
25 - 48 hours	17,146.89	17,456.20	18,403.63
49 - 72 hours	17,020.63	17,098.01	17,746.05
73 - 96 hours	16,747.19	17,014.74	17,945.60
> 96 hours	20,742.29	21,536.65	21,926.08
Students worked < 4 quarters:			
≤ 24 hours	$11,107.49	$10,459.57	$9,576.79
25 - 48 hours	9,630.45	9,481.34	8,918.82
49 - 72 hours	10,457.59	8,902.26	8,755.38
73 - 96 hours	9,773.61	9,683.00	8,745.58
> 96 hours	11,718.55	12,503.32	11,000.82

For the one-year programs, 64 quarter credit hours are typically required for completion. Students who finished more than 64 quarter credit hours had the highest mean

annual earnings in the three years under study. However, the results did not show that the exit noncompleters earned more by simply finishing more credit hours. For example, in 1993-94, the mean annual earnings actually decreased before 64 or more quarter credit hours were completed. In 1994-95, the exit noncompleters who finished over 64 quarter credit hours had the highest mean annual earnings, followed by those who completed 33-48 quarter credit hours (three fourths of the requirement) and those who completed less than or equal to 16 quarter credit hours (a quarter of the requirement). In 1995-96, the exit noncompleters who finished only a quarter (16 hours) or half (17-32 hours) of the required credit hours had higher mean annual earnings than those who completed three fourths of the requirement (Table 6).

Table 6. One-Year Program Exit Noncompleters' Mean Annual Earnings by Credit Hours Earned

Credit Hours Earned	Year 1993-94	1994-95	1995-96
Students worked 4 quarters:			
≤ 16 hours	$18,467.14	$19,055.18	$19,070.48
17 - 32 hours	18,101.58	17,683.34	18,734.81
33 - 48 hours	17,287.74	19,585.54	18,430.38
49 - 64 hours	16,255.58	17,959.02	18,890.63
> 64 hours	18,615.31	20,399.04	18,446.09
Students worked < 4 quarters:			
≤ 16 hours	$9,764.30	$9,370.80	$8,367.65
17 - 32 hours	8,830.09	8,789.61	8,991.56
33 - 48 hours	8,891.55	9,282.28	8,098.83
49 - 64 hours	9,359.01	8,379.18	7,756.28
> 64 hours	10,087.36	11,237.66	9,347.14

For the one-year program exit noncompleters who worked less than 4 quarters, those who completed over 64 quarter credit hours had the highest earnings among the others in the three years, followed by those who finished less than or equal to 16 quarter hours of credit in 1993-94 and 1994-95. In 1995-96, the exit noncompleters who completed 17 - 32 quarter credit hours had higher mean annual earnings than the others except for those who finished over 64 quarter hours of credits (Table 6).

Implications

The findings of this study must be interpreted very cautiously. Whereas students who exited community colleges before completing a program consistently, as a group, showed higher earnings, it should not be concluded that completing a program is "less valuable" than not completing a program. If we look at "traditional college students", meaning those under the age of 25, who attended community colleges, a different picture emerges. For those students, earnings were higher for program completers and increased at a faster rate from quarter to quarter. It is likely that the overall finding of noncompleters having higher earnings is affected by their previous work experience and possibly by their employment while enrolled.

Evidence of the impact of previous work experience on earnings is further demonstrated upon examining the earnings of program exiters as a function of the number of course credit hours completed. Earnings were highest for those who completed less than 24 quarter hours and those who completed more than 96 quarter hours. The first group were probably older workers, with job experience, who needed job skills upgrading. The latter group were probably younger students, who completed most of a program.

Finally, the type of program a student chooses does show an impact on earnings, with Associate degree, meaning General Education and College Transfer programs, recipients having lower earnings than completers of technical and vocational programs. This finding is expected, since the Associate degree programs are not designed to provide workplace skills, but rather skills needed for successful completion of a four year degree. Again, however, it should be pointed out that it is not possible to determine part-time versus full-time employment and the difference may be due to Associate degree recipients working part-time while enrolled at a four year university.

Overall, the findings of the study do indicate the value of using UI data to track student employment. This first step is important in understanding employment of program participants and subsequent earnings. The true value of the Common Follow-up System, however, lies in its potential for the future. As part of the CFS project, a longitudinal database is being built. This database, which will include the gathering of the social security numbers of all 9th grade North Carolina public school students, will allow researchers to track individuals from high school, through postsecondary training and workforce participation. With this information, decision makers will better understand how to meet the needs of individuals for education and training.

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